



Metallic Resources



# MetaFlux™ WS-1055S Product Bulletin

## Alcohol Based Water Soluble Flux

Metallic Resources' MetaFlux WS-1055S is an isopropyl alcohol based low solid content water soluble soldering flux specially formulated for lead free wave soldering applications where post soldering residues are washed with water. It contains a neutral halide activation system that achieves peak efficiency and activity at 500°F (260°C), thus promoting excellent solderability. It is available in 1-gal. containers, 5-gal. pails, and 55-gal. drums.

## Designed for Spray Fluxing

MetaFlux WS-1055S is specially designed for wave soldering applications, component tinning, and wire tinning where post-solder residues are water washed. It is successfully used in spray and drag fluxing soldering processes.

## Versatile and Economical

MetaFlux WS-1055S solder flux can be used over a wide variety of electronics applications, thus creating versatility and economy. The high activity makes it ideal for high production rates for greater cost-effectiveness. The neutral pH ensures that a neutral residue remains on the printed circuit board and components after soldering. This residue is easily cleaned in water.

## Application Directions

MetaFlux WS-1055S is formulated for foam or drag fluxing applications as supplied. The flux is formulated for use as supplied. A topside board temperature of 190-240°F (88-115°C) is recommended for the best results. Solder as quickly as possible after fluxing. After soldering, the residue should be cleaned off and washed with hot distilled or de-ionized water (140°F or 60°C minimum).

## Physical Properties

|                         |                              |
|-------------------------|------------------------------|
| Form                    | Clear liquid                 |
| Color                   | Colorless                    |
| Specific Gravity        | 0.851 ± .005 @ 71.6°F (22°C) |
| Solids Content          | 1.5 – 2.4%                   |
| Flash Point             | 60°F (15.5°C)                |
| Boiling Point           | 180.5°F (82.5°C)             |
| Freezing Effects        | None                         |
| Discoloration           | None                         |
| Halide Content          | 0%                           |
| Water Content           | <1.0%                        |
| Acid Number             | 20 - 24                      |
| Optimum Soldering Range | 490 - 520°F (255-270°C)      |



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## Safety Precautions

MetaFlux WS-1055S is flammable and should be stored in plastic containers away from heat, sparks, open flame, and other sources of ignition. Use adequate ventilation to remove fumes. Avoid contact with eyes and skin. Do not inhale vapors or fumes. Keep away from children. Dispose in accordance with all applicable regulations. This product has a one (1) year shelf life. Refer to the Safety Data Sheet (SDS) for additional information.

## Standards Met

### IPC J-STD-004

Type ORLO classification

### Fluorides by Spot Test

This test method is designed to determine the presence of fluorides in soldering flux.

(IPC- TM-650, 2.3.35.1)

Result: Passes

### Halide Content

This test method is designed to determine the halide content of fluxes attributable to chlorides, bromides, and fluorides. The halide content is reported as the weight percentage of halide to the solid portion of the flux. (IPC-TM-650, 2.3.35 or 2.3.28 and 2.3.35.2 or 2.3.28)

Result: Passes (chlorides or bromides (0.6%).

Result: Passes No fluorides present (0%)

### Solids Content

This test method is designed to determine the residual solids content of the liquid flux after evaporation of the volatile chemicals.

(IPC-TM-650, 2.3.34)

Result: 2.2%

### Corrosion Test

This test method is designed to subjectively determine the corrosive properties of the flux residue under extreme environmental conditions.

(IPC-TM-650, 2.6.15)

Result: Moderate Corrosion